

# I. AGENDA



STATE OF NEVADA  
 COMMISSION ON MINERAL RESOURCES  
**DIVISION OF MINERALS**  
 400 W. King Street, Suite 106  
 Carson City, Nevada 89703  
 (775) 684-7040 • Fax (775) 684-7052  
<http://minerals.nv.gov/>



**STEVE SISOLAK**  
 Governor

**Las Vegas Office:** 2030 E. Flamingo Rd. #220, Las Vegas, NV 89119  
 Phone: (702) 486-4343; Fax: (702) 486-4345

**RICHARD PERRY**  
 Administrator

**COMMISSION ON MINERAL RESOURCES**  
 Legislative Building, Room 3138  
 401 South Carson St., Carson City, NV 89701

Thursday, November 21, 2019

2:30 P.M.

**AGENDA**

**CALL TO ORDER**

The Agenda for this meeting of the Commission on Mineral Resources has been properly posted for this date and time in accordance with NRS requirement.

**ROLL CALL**

**PLEDGE OF ALLEGIANCE**

**COMMENTS BY THE GENERAL PUBLIC**

Pursuant to N.R.S. 241, this time is devoted to comments by the public, if any, and discussion of those comments. No action may be taken upon a matter raised under this item on the agenda until the matter itself has been specifically included on a successive agenda and identified as an item for possible action. Public comments may be limited to 5 minutes for each person. **ACTION WILL NOT BE TAKEN**

**I. AGENDA**

A. Approval of the Agenda

**FOR POSSIBLE ACTION**

**II. MINUTES**

A. Approval of the August 15, 2019 meeting minutes

**FOR POSSIBLE ACTION**

**III. NEW BUSINESS**

A Use of Lidar, InSAR and Drones by the Division of Minerals  
 New technologies are being utilized in the AML and Geothermal programs of the Division. Courtney Brailo will provide an overview and explain how they are used.

**FOR DISCUSSION ONLY**

B: Requiring exploration entities to share data once a project is completed.  
 Discussion of possible strategies to require or incent exploration entities to submit drill and assay data when projects are completed. Rich Perry

**FOR POSSIBLE ACTION**

#### **IV. OLD BUSINESS**

A. Revisit of Claim Fee Reduction

**FOR POSSIBLE ACTION**

At the May 9, 2019 Commission meeting, the Commission instructed the Division to begin the rule-making process to decrease the claim fee under NAC 517.200 by \$0.50 per claims. The Division developed a draft of proposed changes to NAC 517, and has discussed the impact of a fee change with County Recorders. Mike Visher will present the status of the draft, feedback from County Recorders possible options for moving forward.

B. Recap of 2019 AML program

**FOR DISCUSSION ONLY**

Logging and securing work completed by interns and hard closure projects completed by contractor Environmental Protection Services will be presented, along with a forecast of future work. Rob Ghiglieri

#### **COMMISSION BUSINESS**

- A. Set Date for Next Commission meeting

#### **COMMENTS BY THE GENERAL PUBLIC**

Pursuant to N.R.S. 241, this time is devoted to comments by the public, if any, and discussion of those comments. No action may be taken upon a matter raised under this item on the agenda until the matter itself has been specifically included on a successive agenda and identified as an item for possible action. All public comments will be limited to 5 minutes for each person.

**ACTION WILL NOT BE TAKEN**

#### **ADJOURNMENT**

#### **NOTICE TO PERSONS WITH DISABILITIES**

Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify the Division of Minerals, 400 W. King Street, Suite 106, Carson City, NV 89701 or contact Sherrie Nuckolls at (775) 684-7043 or Email [SNuckolls@minerals.nv.gov](mailto:SNuckolls@minerals.nv.gov) The Commission will be attending a field trip on Friday 11/22/19 to Kappes Cassiday & Associates Metallurgy testing lab in Reno. The Commission will meet at Kappes Cassiday & Associates located at 7950 Security Circle, Reno, NV 89506 at 9 a.m. Members of the public may attend but must provide their own transportation and safety equipment. Advanced notification is required. Please call Sherrie Nuckolls at (775) 684-7043.

## II. Minutes



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**RICHARD PERRY**  
 Administrator

Thursday, August 15, 2019

1:00 P.M.

**MINUTES**

**CALL TO ORDER**

1:00 pm by Dennis Bryan

**ROLL CALL**

Commission	Staff	Public
Richard DeLong (absent)	Richard Perry	Rachel Micander
Dennis Bryan	Mike Visher	Jim Faulds
Nigel Bain	Bryan Stockton	
Mary Korpi	Sherrie Nuckolls	
Bob Felder	Courtney Brailo	
John Snow	Garrett Wake	
Art Henderson	Lowell Price	

**PLEDGE OF ALLEGIANCE**

Led by Dennis Bryan

**COMMENTS BY THE GENERAL PUBLIC**

There were no comments by the public.

**I. AGENDA**

A. Approval of the Agenda

**Motion to approve the agenda made by:** Nigel Bain

**Seconded by:** Mary Korpi

**Unanimously approved**

**II. MINUTES**

A. Approval of the May 9, 2019 meeting minutes

**Motion to approve the minutes made by:** Bob Felder

**Seconded by:** John Snow

**Unanimously approved**

**III. NEW BUSINESS**

**A. Biennium contract with the Nevada Bureau of Mines and Geology**

Mike Visher provided a copy of the Contract Summary approved by the Board of Examiners on July 9, 2019. It included the scope of work between the Division and the Nevada Bureau of Mines and Geology that was approved by the Commission and includes \$90,000 per Fiscal Year for the projects as listed. There was one additional project the Commission wanted to see funded at the February 7, 2019 meeting. The contract is at UNR for signatures, the scope of

work was developed and approved by both agencies, once the contract comes back it will then be submitted to the Clerk of the Board for approval and funding will be approved through a work program to be submitted shortly.

## **B. Mineral Resource Database Project (MRDP)**

Rachel Micander, with the Nevada Bureau of Mines and Geology, presented a PowerPoint presentation with an update of the project's progress and gave a live tour of the website through a Beta Application demonstration.

**John Snow:** What is the gravity data?

**Rachel Micander:** It's from the USGS.

**Dennis Bryan:** What's the overlap with Lucia as the NDOM webmaster?

**Rachel Micander:** We're pulling a lot of the data from what Lucia has and putting it all into this one application so users don't have to go to different locations, when Lucia updates something it will go into this application.

**Rich Perry:** What we've heard in the last couple of years when we've attended PDAC is some provinces in Canada and some states have pretty detailed databases where you can look up a lot of this information. All of the data from project reports that in Nevada often times end up in container cargo boxes or destroyed or stored in peoples garages. I think this will open up some opportunities for a lot of people who are looking for this information in one spot. The intent was to build something that had a framework that was easily usable by the public and was housed in NBMG, where it should be, and the work that Lucia has been doing on mining claims links in with this. What you just saw was the beta site which can't be logged into yet. The next step is to pull in experts that do this kind of work and have them go through and see what we've done.

**Rachel Micander:** We're shooting for November for that meeting to get feedback from the experts and see what needs to be added or changed, and what they think. Our goal is to have this ready at the GSN Symposium in May of 2020.

**Rich Perry:** Yes, in May of 2020 at one of their workshops that could be attended early on.

**Dennis Bryan:** The Bureau is going through past files they've been collecting and they're scanning them, all of that will end up in this database at some point in time?

**Rachel Micander:** A fair amount, yes.

**Dennis Bryan:** The ultimate goal then would be if a brand new exploration entity would come to Nevada that doesn't know anything about Nevada, it's a one stop service to go to the Bureau and they would be able to get everything including everything at NDOM is included with your information, it would be a one stop shop?

**Rachel Micander:** Yes, the point of this web application was to create a one stop shop for people to digitally be able to come and look to see what we have available. If they require additional information they can always contact NDOM or NVMG; however, we anticipate the majority of the information they will need will be included in this web application and can be downloaded.

**Dennis Bryan:** Excellent, I think it's fantastic.

**Bob Felder:** I think this is a great thing, but it's somewhat limited to large regional data sets and USGS generated data, NBMG generated data, etc. There's a huge amount of data generated by companies that never gets shared. I think when companies come into Nevada they can get started with a regional data set but it's really the project drill data that's going to be important someday. I think we should think of this as a long term project and how do we change the rules in Nevada to require companies to share data once a project is wrapped up, I know there's challenges with that but I think we should think about a long term way to get all the project data, drill hole data, because when someone comes in and stakes claims and has a new project they can find out that there's 25 holes in their project but they can't find anything about those holes except maybe what was permitted and if they're lucky they can find somebody who knows something about it but it's a major shortcoming so we as explorationists re-invent the wheel over and over again and often times it's a fatal flaw because we have a target that we love but there's those darn 6 Newmont holes that we can't get our hands on it and could kill our target if only we knew. I don't know how to approach it but at the level of the Minerals Commission let's think about it over the long term, how we can make that happen someday for Nevada.

**Rich Perry:** I'll add it to the agenda for the next meeting.

## **C. 2019 Northern and Southern Nevada Teacher Workshops**

Garrett Wake and Courtney Brailo presented a PowerPoint presentation explaining the benefits the workshops provides to teachers, shared examples of the different classes taught, tours, attendance and surveys showing the positive feedback received.

**Dennis Bryan:** How many years have the workshops been going on?

**Courtney Brailo:** People who have been on the Education committee have been doing this for over 30 years.

**Dennis Bryan:** 30 years ago, I was intimately involved and at that time I put together a program on making concrete, do you still do that?

**Garrett Wake:** We have so many activities, I have a book in my office that has approximately 50 activities, it's probably in there, and we haven't done it in a while.

**Dennis Bryan:** Even intelligent people still do not know the difference between cement and concrete and back then every teacher that went through the course, when they came out they knew the difference.

**Garrett Wake:** I bet we could get sponsorship.

**Courtney Brailo:** We keep records on all the activities we've done and we do try to rotate, maybe it's time to bring that back in again.

**Dennis Bryan:** That's great, thank you very much.

**Rich Perry:** I remember two years ago that activity was still taking place because Sam Macaluso was teaching it. A lot of the activities have been upgraded and brought into the next generation science standards which is a requirement for teachers to take into their classrooms, I think all of the NDOM employees and Rachel Micander who have been working on this have really designed and brought these new programs they can hand to teachers because that's the goal.

#### **IV. OLD BUSINESS**

##### **A. Legislatively-Approved 2020-2021 NDOM Budget**

Rich Perry presented a PowerPoint presentation of the final step of the budget including the budget approval path, a detailed synopsis of the Legislatively-approved budget, performance measures for Division of Minerals and the priorities and core functions.

**John Snow:** The number for BLM and Forest Services \$8,397, it looks odd, all four amounts are the same.

**Rich Perry:** I'll have to go back and look, I took this off of the NEBS website and I did not populate those numbers but I'll have to go back and check. Mike can you recall?

**Mike Visher:** Yes, as I recall what was in the budget, was \$50K a year from the BLM and for the Forest Service it was the remaining amount that we had on the assistance agreement divided by 2 and that's how we have that split equal in those two years.

**Rich Perry:** Thanks Mike, I'll send everyone a corrected version.

##### **B. Fluid Minerals Activity Update and FY2019 Production**

Lowell Price went over a handout which included permit and drilling activity, summaries of 2018 and 2019 dissolved mineral resource exploration activity, summary of geothermal and oil well inspections for Fiscal Year 2019, sundry notice activity and BLM lease sales. Lowell accessed NDOM's website and went over the oil and gas production in Nevada, geothermal power production graphs, and dissolved mineral resource exploration reports and forms.

**Dennis Bryan:** I noticed that dissolved minerals activity isn't very stellar, what's happening with mining claims for lithium nowadays?

**Rich Perry:** There is far more interest in the lode exploration for lithium clays. On the open data site there was 11,000 or 12,000 brine claims we assumed were lithium brine claims and those will need to file their notice of intent to hold in August and we'll see how many stay. That's a huge amount of claims but if there's no activity and there's no drilling for the brine then it will be a big question. There could be a big drop in mining claims because I don't know why the owners of the claims would continue to hold them if they're not going to do any long term exploration if there's not much activity out there. The lode claims, on the other hand, have increased.

**Dennis Bryan:** All of these are placers?

**Rich Perry:** Yes, these all are placers. We didn't have a lot of placer claims in the state before the lithium brine staking boom, also known as inferred lithium claims.

**John Snow:** Last month the two operators that had the conflict over the water rights in Clayton Valley settled, so activity could and should pick up there since they came to an agreement.

**C. Courtney Brailo graduated from the TOPCORP Energy Training for Regulators**

Courtney Brailo gave an update with a PowerPoint presentation showing Nevada's participation, topics covered in training and moving forward with TOPCORP. In 2019, Nevada ranked 26/31 crude oil, 33/34 natural gas production and is second in the United States for geothermal production; and growing every year.

**Dennis Bryan:** That was great; it sounds like you enjoyed the opportunity to participate.

**Courtney Brailo:** Yes, the classes were just as important as the networking with the other states.

**Dennis Bryan:** Courtney brought up one thing she talked about the geothermal is second to California, when and if are we going to surpass California in geothermal production?

**John Snow:** If you saw that graph Lowell had in 2007 where it ramped up. In 2007, is when the BLM changed its geothermal leasing procedure and made public lands available, then in 2009 that's when our Legislature created the renewable energy portfolio standard for the 20%. This year with SB38 and the last Legislature moved it to 50%, that curve could maybe replicate itself and this lease sale that's upcoming with the 389,000 acres is an indication we're going to have a big uptick and there's a lot of plant efficiencies that Lowell eluded to between moving water around to make some of the older binary plants more efficient and the new modern Ormat machines are quite efficient.

**Dennis Bryan:** What's California's production?

**John Snow:** I can't tell you that.

**Dennis Bryan:** Can we surpass them at some point?

**John Snow:** Absolutely

**Dennis Bryan:** That would be a great opportunity to get some publicity for the State of Nevada and NDOM.

**Rich Perry:** I will look that up and have an answer by dinner tonight but I think they're double to our numbers or significantly more but all is done or much earlier. There wasn't a lot of drilling activity because it's very difficult to permit things in California and there's a different permitting system that involves the state, county and the BLM. Then there's CEQA (California Environmental Quality Act) that enters into that and it's the equivalent of NEFA of non-federal lands. We do not have an equivalent of that in Nevada, although it has at times been proposed by certain entities in the Legislature and would be a real detriment, I think, to development if we ever had anything like that, that's something we've got to watch.

**D. Update on NAC 534A, NAC 517 and NAC 519A regulation changes**

Rich Perry presented an update with a PowerPoint presentation regarding Geothermal Resources and Pooling of Reclamation Bonds with two Hearings at the November CMR meeting, and Mining Claims with an expected Hearing at the February 2020 CMR meeting.

**COMMISSION BUSINESS**

**A. Determination of time and place of next CMR meetings**

November 21, 2019 in Carson City with two separate Hearings and may be an all-day event.

**COMMENTS BY THE GENERAL PUBLIC**

Jim Faulds with the Nevada Bureau of Mines and Geology gave an update on their geothermal and mineral activities.

Garret Wake with NDOM talked about Nevada's role in the NAAML (National Association of Abandoned Mine Lands Program) conference in 2020. NDOM also won the Hard Rock Reclamation Award for its AML closure work at Gold Butte National Monument.

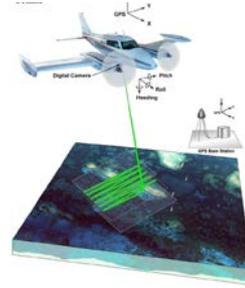
Rich Perry with NDOM talked about the 2020 Nevada Reclamation Awards nomination flyer that included the 2019 winners.

**ADJOURNMENT**

3:55 pm

### **III. NEW BUSINESS**

### **III. A Use of Lidar, InSAR and Drones by the Division of Minerals**



# Application of New Technologies @ NDOM

Coding & Software, InSAR, LiDAR, UAS  
Commission on Mineral Resources

Courtney Brailo  
November 21, 2019

# Coding & Software - Tips & Tricks

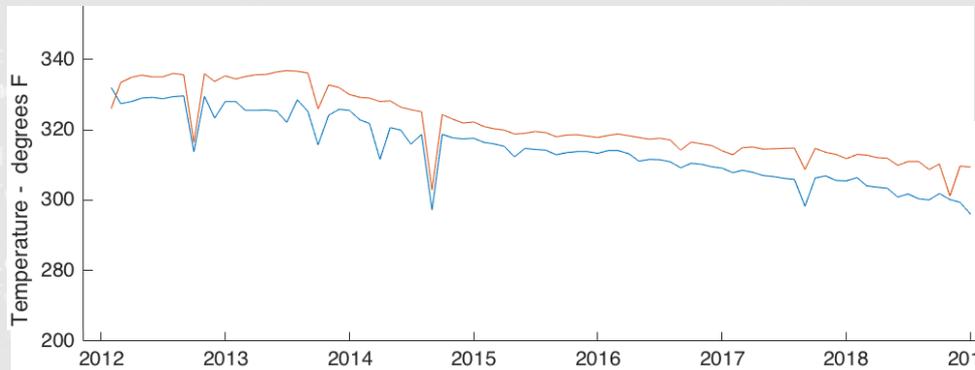
## Age of Automation

- **We all want data quickly, easy to use and understand!**
- **Coding tools have been around for a long time**
  - Allows us to process large amounts of data with limited ‘clicking’, without coding language this wouldn’t be possible
- **We have been doing some of this work in-house**
  - Data Availability & Open Data (Lucia)
  - AML SOSA Database (Lucia & Rob, Terraspectra/Grant Funded)
- **Geothermal Temperature Plots**

# Geothermal Temperature Data

- Data we already have:
  - Reported to us monthly, for all geothermal fields
- Temperatures of resources at production & injection wells
  - How temps change (or don't!) through time
- With code we can process all these data at once
  - **All wells, all years, in all 23 fields/categories**
- See changes overall field and at each well

# Why are these data useful?



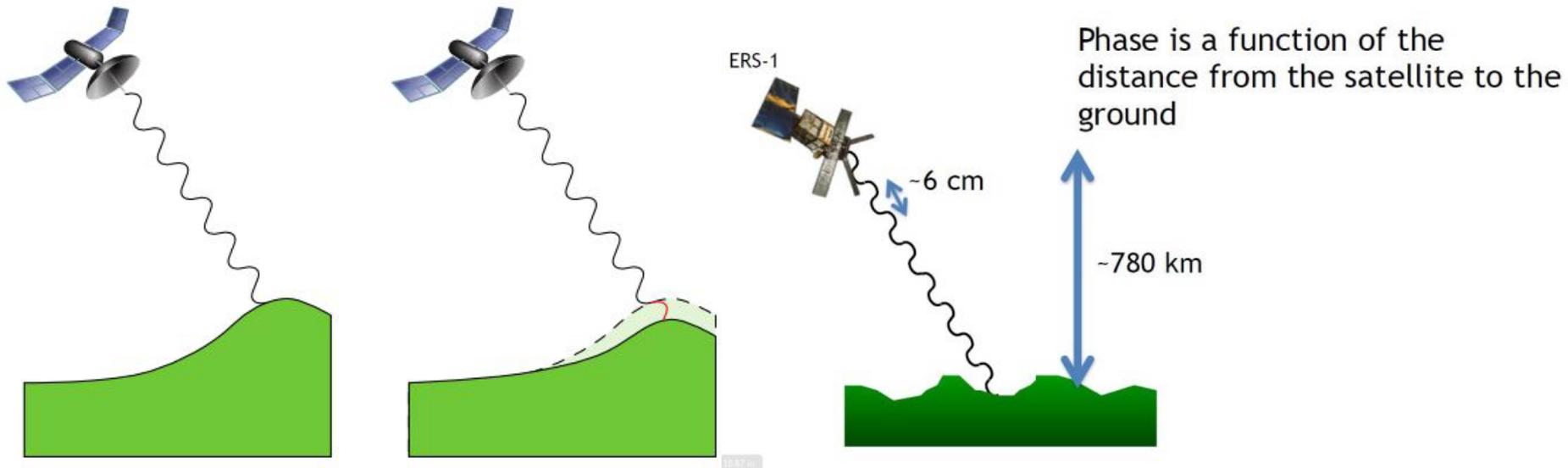
- **Monitoring Resources**

- Address issues before problem arise.
- Are injected waters being pumped into the correct resource?
- Can we weigh in on any basin-related topics or issues? Cooling of wells?

- **Data Clean Up!**

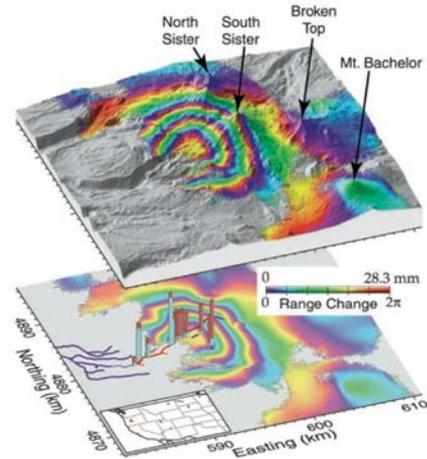
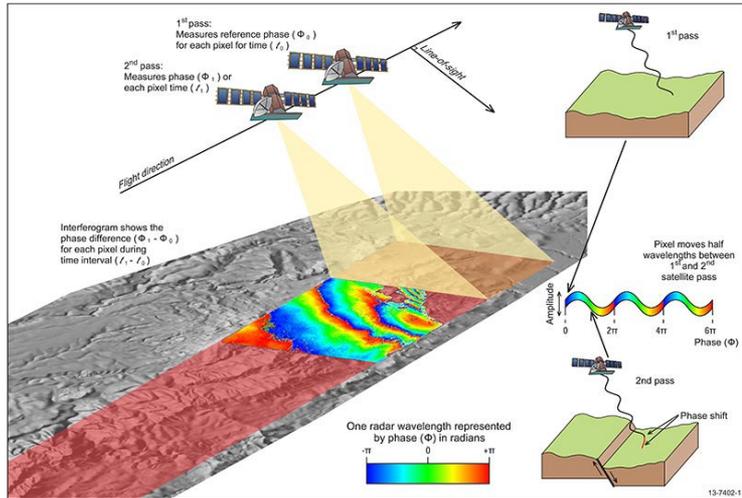
- May help us find errors in our database and keep a cleaner, more accurate record, of our well data.

# InSAR



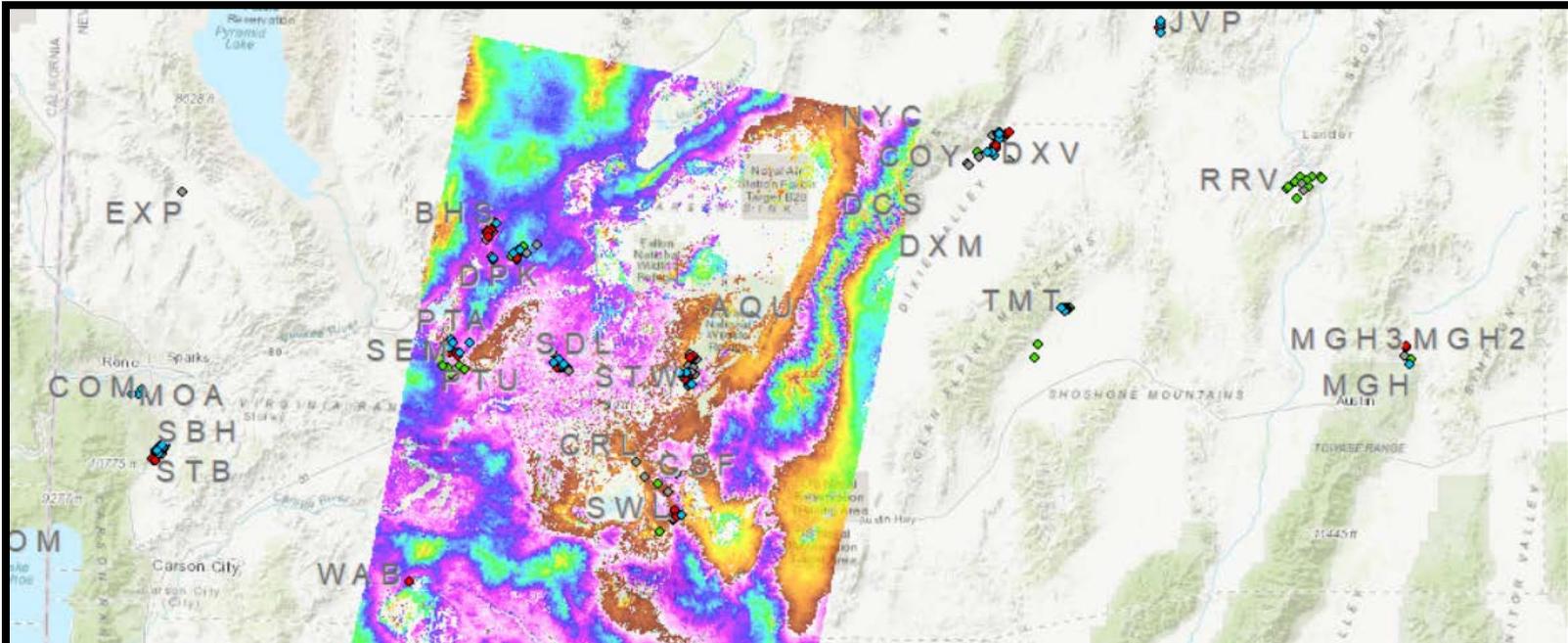
- **Interferometric Synthetic Aperture Radar**
  - Interferometric - Uses wave interference
  - Synthetic Aperture – Uses motion to increase resolution/apparent size of aperture
  - Radar - Emits microwaves (*cms long*), measure echoes

# InSAR



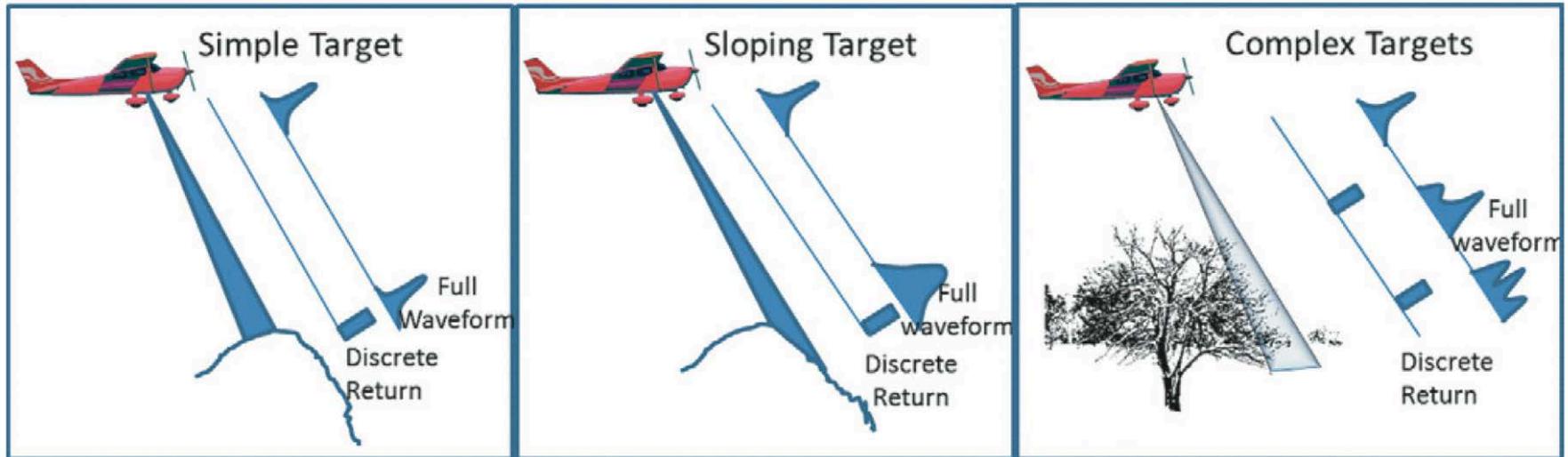
- Can measure deformation if greater than  $\sim$ size of an outdoor shed
- **Oil/Gas/Geothermal (OGG) well monitoring**
  - Amount of pumping, timing and effects on surrounding areas

# Results!



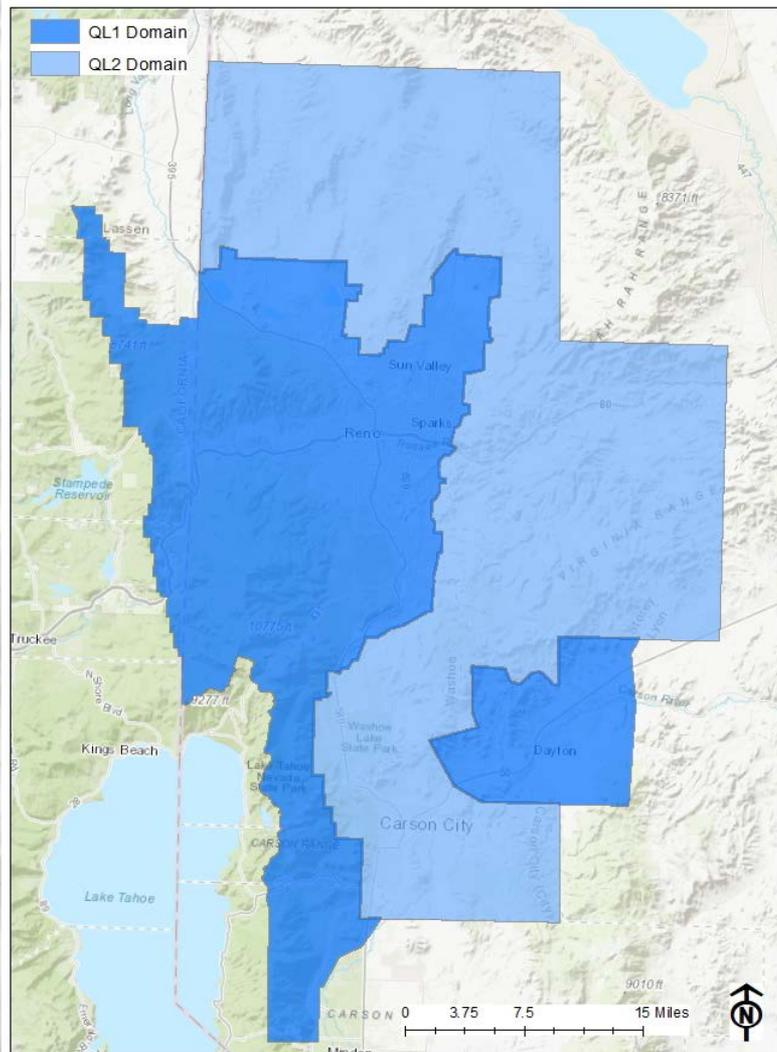
- January to August, 2018
  - 11 fields investigated in this swath of InSAR
    - 7 show no detectable change
    - 3 show changes of <1cm
    - 1 shows change of ~2.5 cm
  - Production shows more subsidence than injection shows
- bugling

# Lidar



- **LiDAR – LIght Detecting And Ranging**
  - Uses lasers to scan earth or object
  - Calculates return times of reflections
  - XYZ data
  - Interpolation of these points to create a DEM

# Lidar



- **2017 LIDAR of Reno-Carson City Area**
  - Completed by the NBMG
  - With partnerships from the Washoe County Basemap Committee, US Forest Service, Lyon County & Storey County
  - QL1 & QL2 data

# Benefits of Lidar

- Quickly identified hazards not easily recognizable with traditional imagery or field work
- Still requires physical examination of suspected hazards
- Can greatly help prioritize areas of concern
- Can help to completely inventory an area during field work if done ahead of time

# UAS



- AML
  - Saved hours of field time
  - Simple/easy to use
  - Increased safety

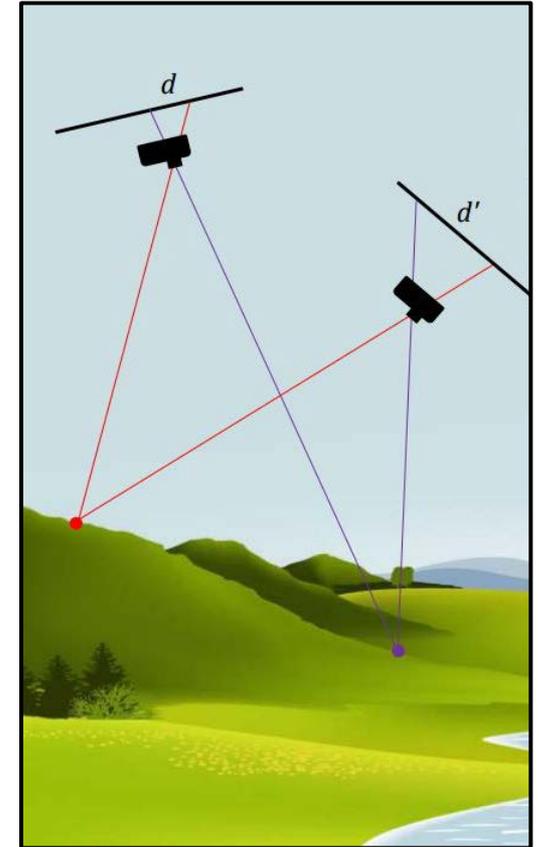


# UAS



- Reclamation Documentation
  - Before, during, after use of bond \$\$ to do site clean up
  - AML hard closures
- Next steps:
  - **Personalized background maps, needs to be offline capable & easy to use**
  - Wellsite inspections – washed out roads, old wells, winter inspections

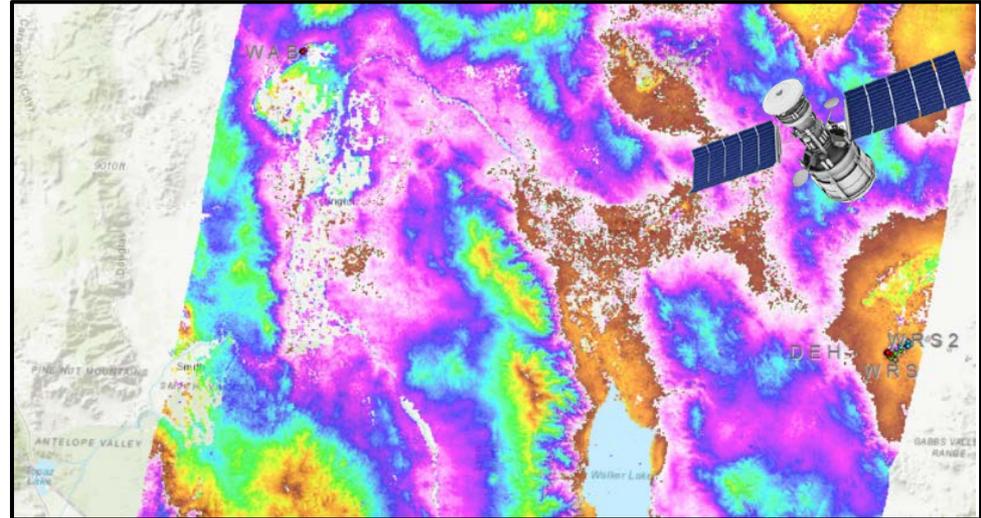
# UAS – Coming Soon...



- Instrumentation
  - Gas leaks
  - Magnetometer – finding well heads
  - Heat anomalies/geothermal leaks
- 3D models
  - Available Now

# Questions?

```
3 require File.expand_path("../lib/gemspec", __FILE__)
4 # Present database registration at the gemspec
5 abort("The Rails environment is missing. You should specify the environment with the RAILS_ENV environment variable.")
6 require "spec_helper"
7 require "rspec/rails"
8
9 require "capybara/rspec"
10 require "capybara/rails"
11
12 Capybara.javascript_driver = :webkit
13 Category.delete_all; Category.create
14 Shoulda::Matchers.configure do |config|
15   config.integrate do |with|
16     with.test_framework :rspec
17     with.library :rails
18   end
19 end
20
21 # Add additional requires below this line.
22
23 # Requires supporting ruby files with standard gemspec
24 # spec/ support/ and its subdirectories.
25 # in _spec.rb will have to require them.
26 # run twice. It is recommended that you
27 # end with _spec.rb. The can be configured
28 # in the Gemfile.
29
30 No results found for 'httpauth'
```



**III. B Requiring exploration entities to share data once a project is completed**

THIS SECTION IS INTENTIONALLY LEFT BLANK.  
HAND OUTS AND PRESENTATION WILL BE GIVEN AT THE  
MEETING.

## **IV. Old Business**

## **IV. A Revisit of Claim Fee Reduction**

**NEVADA DIVISION OF MINERALS  
DRAFT OF PROPOSED REVISIONS  
TO NAC CHAPTER 517 – MINING CLAIMS**

(Additions in *blue italics*, deletions in ~~red strikethrough~~)

**GENERAL PROVISIONS**

**NAC 517.010 Definitions.** (NRS 517.100) As used in this chapter, unless the context otherwise requires, the words and terms defined in NAC 517.020 to 517.110, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.020 “Base map” defined.** (NRS 517.100) “Base map” means a sheet of Mylar® or other permanent material capable of being reproduced by standard means, which depicts the locations of all patented and unpatented mining claims recorded in a township, fractional township or portion of a township included within the boundaries of a county.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.030 “Claim” defined.** (NRS 517.100) “Claim” means any patented or unpatented mining claim.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.040 “Claimant” defined.** (NRS 517.100) “Claimant” means a person who is the holder of the right to sell or transfer all or any part of his or her interest in an unpatented mining claim or is the owner of a patented mining claim.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.050 “County map of mining claims” defined.** (NRS 517.100) “County map of mining claims” means the set of maps established and maintained by a county, pursuant to the regulations of the Division of Minerals of the Commission on Mineral Resources, which accurately delineates the location of all claims recorded in the county after July 1, 1971. The map consists of all the base maps and overlays which are required to depict adequately all areas of land which contain claims located within the county.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.060 “Fractional township” defined.** (NRS 517.100) “Fractional township” means a township ~~whose area is more or less than 36 square miles~~ *containing less than 36 normal sections* as established by the Federal Government.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.065 “Government lot” defined.** *“Government lot” means a subdivision of a section which is not described as an aliquot part of the section, but which is designated by number, e.g., LOT 2. A government lot may be regular or irregular and its acreage varies from that of regular subdivisions.*

**NAC 517.066 “Master title plat” defined.** *“Master title plat” means a composite of the federal government survey plats of a township on which is shown the ownership and land status.*

**NAC 517.070 “Overlay” defined. (NRS 517.100)** “Overlay” means a sheet of Mylar® or other permanent material capable of being reproduced by standard means, with the township and range identified and the section lines shown, upon which claims may be plotted if the base map becomes cluttered because of a congestion of claims in one or more areas.

(Added to NAC by Dep’t of Minerals, eff. 9-1-88)

**NAC 517.080 “Patented mining claim” defined. (NRS 517.100)** “Patented mining claim” means a lode or placer claim or mill site for which a patent has been issued by the Federal Government.

(Added to NAC by Dep’t of Minerals, eff. 9-1-88)

**NAC 517.090 “Person” defined. (NRS 517.100)** “Person” means a natural person, any form of business or social organization and any other legal entity including, but not limited to, a corporation, partnership, association, trust, unincorporated organization, government, governmental agency or political subdivision of a government.

(Added to NAC by Dep’t of Minerals, eff. 9-1-88)

*NAC 517.091 “Protraction diagram” defined. “Protraction diagram” means a diagram prepared by the federal government, and filed in the Nevada State Office of the Bureau of Land Management, representing the plan for the extension of the rectangular system over unsurveyed lands.*

*NAC 517.095 “Section” defined. “Section” means the unit of subdivision of a township with boundaries conforming to the rectangular system of surveys, nominally one square mile, containing 640 acres.*

**NAC 517.100 “Township” defined. (NRS 517.100)** “Township” means ~~land originally divided by the Federal Government by lines intersecting true north and south lines at right angles so as to form parcels measuring 6 miles square. Each township is subdivided into 36 sections, each 1 mile square and containing 640 acres as nearly as may be and must be numbered, respectively, beginning with the number 1 in the northeast section and proceeding west and east alternately through the township with progressive numbers to and including 36 located in the southeast section~~ *the unit of survey of the public lands; normally a quadrangle approximately 6 miles on a side with boundaries conforming to meridians and parallels within established limits, containing thirty-six sections, some of which are designed to correct for the convergence of meridians or range lines.*

(Added to NAC by Dep’t of Minerals, eff. 9-1-88)

**NAC 517.110 “Unpatented mining claim” defined. (NRS 517.100)** “Unpatented mining claim” means a lode or placer claim, tunnel right or mill site located pursuant to 30 U.S.C.A. §§ 22 to 54, inclusive, for which a patent has not been issued.

(Added to NAC by Dep’t of Minerals, eff. 9-1-88)

## MAPS

### **NAC 517.120 Basic drafting standards. (NRS 517.100)**

1. The name of the county, township and range must appear at the top of each base map or overlay.
2. Section lines must be accurately drawn for each township, *or fractional township, and conform to those depicted on federal government master title plat, or protraction diagram for unsurveyed lands*, and section numbers must be properly labeled in each section.
3. Each new claim plotted after July 1, 1987, must be drawn in black permanent ink. The outline of each claim plotted before July 1, 1987, must be drawn in permanent waterproof ink and be clearly distinguishable if reproduced by standard means.
4. Except as otherwise provided in subsection 5, each claim must be plotted at a scale of 1 inch equaling 2,000 feet or 30 chains equaling 1 inch.
5. The Administrator of the Division of Minerals of the Commission on Mineral Resources may, upon request, approve an alternate scale.  
(Added to NAC by Dep't of Minerals, eff. 9-1-88)

### **NAC 517.130 Designation of townships containing no claims; inclusion of extraneous information. (NRS 517.100)**

1. For each township or fractional township which does not contain any claims there must be one base map or a statement that the township or fractional township does not contain any claims. If such a statement is included, it must be placed in the master index for the county map of mining claims.
2. A base map or overlay must not include topographic features or other extraneous information. If master title plats, *or protraction diagrams*, obtained from the Bureau of Land Management are used as base maps or overlays and those plats contain information other than the information required pursuant to this chapter, that information is not required to be removed from the map.  
(Added to NAC by Dep't of Minerals, eff. 9-1-88)

### **NAC 517.140 Identification of patented and unpatented claims. (NRS 517.100)**

1. Each patented mining claim must be identified on the base map or overlay by the appropriate patented mining claim number assigned by the Bureau of Land Management and must be described in the manner prescribed in NAC 517.160.
2. The location of each unpatented mining claim which is recorded in the county must be drafted on the proper base map or overlay from the location map furnished by the claimant. Each unpatented mining claim must be identified on the base map or overlay by the name of the claim or the number or letter assigned to the claim by the county surveyor.
3. Crosshatching, stippling or any other similar method of drafting must be used to distinguish between patented and unpatented claims.  
(Added to NAC by Dep't of Minerals, eff. 9-1-88)

### **NAC 517.150 Preparation of overlays. (NRS 517.100)**

1. If an area of a base map becomes cluttered by a congestion of claims, an overlay of the same material and construction as the original must be prepared in the same manner and at the

same scale as the base map and used for all future plotting. If that overlay becomes cluttered, additional overlays must be similarly made and used.

2. Each overlay so constructed must:

- (a) Be numbered sequentially for each base map for which they are used;
- (b) Include the year in which the first claim was plotted on the overlay; and
- (c) Precede the base map for which it overlays.

3. No information may be included on the base map or overlay to distinguish among a lode or placer claim, mill site or tunnel right. The information may be included in the description of the claim as prescribed in NAC 517.160.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.160 Descriptions of claims. (NRS 517.100)**

1. Except as otherwise provided in NAC 517.170, the description of each claim depicted on a base map or overlay must be drafted in the space provided on the right-hand side of the map or on a separate facing page.

2. Information contained in the description must include:

- (a) The number or letter assigned to the claim by the county surveyor;
- (b) The name of the claim;
- (c) The name of the original locator of an unpatented claim; and
- (d) The mineral survey number for each patented claim.

3. If the space provided on the right-hand side of the base map or overlay is not sufficient to describe each of the claims shown on a base map or overlay, a separate sheet must be used to describe the additional claims.

4. The separate sheet must be:

- (a) The same size and contain the same information as the space originally provided; and
- (b) Affixed permanently to the base map or overlay in such a manner that all the descriptions of the claims are visible at the same time.

5. All lettering in the description of the claim must be done in a neat, legible and uniform manner.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.170 Use of separate sheet to describe claims. (NRS 517.100)** The county surveyor may use a separate sheet for placing the description of a claim on a base map or overlay if:

1. That procedure is used for the complete county map of mining claims;
2. The sheet is the same size as the sheet used for the base map or overlay;
3. The sheet is placed in the binder in front of and facing the base map or overlay to which it applies;

4. A separate facing sheet is used for each base map or overlay; and

5. The sheet is properly identified with the base map or overlay and contains the information required pursuant to NAC 517.160.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.180 Notifying claimant of deficiency in map; filing amended map. (NRS 517.100)** If a claim location map is recorded by a locator and that map does not provide adequate information for plotting on the county map of mining claims, the county surveyor shall promptly notify the claimant of the deficiency. The claimant shall file with the county recorder

an amended map which contains the necessary information pursuant to subsection 2 of NRS 517.040. *For the purposes of determining deficiency of a map depicting placer claims, placer claims may be described on the map by:*

- 1) Aliquot parts for surveyed sections; or*
- 2) Aliquot parts for unsurveyed sections depicted on a protraction diagram; or*
- 3) Metes and bounds for unsurveyed sections depicted on a protraction diagram which are denoted as having more than or less than 640 acres; or*
- 4) Complete government lots for the allowed acreage of the claim; or*
- 5) Metes and bounds for a portion of a government when the lot is greater than 20 acres.*

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**NAC 517.190 County map of mining claims: Updating; maintenance of original and copy. (NRS 517.100)**

1. Each county map of mining claims must be updated and all new claims must be added to the map at least once each month.
2. The original of each county map of mining claims must be kept in good condition and in a safe place.
3. A complete and accurate copy of the map must be:
  - (a) Kept at the county seat;
  - (b) Available for use by the public;
  - (c) Updated once each month in the same manner as the original map; and
  - (d) Maintained in a secure binder in numerical order by township and range.

(Added to NAC by Dep't of Minerals, eff. 9-1-88)

**FEES**

**NAC 517.200 Filing fee. (NRS 513.063, 517.185)** The amount of the filing fee that is imposed pursuant to subsection 1 of NRS 517.185 is **\$65.50** per claim.

(Added to NAC by Comm'n on Mineral Resources by R069-99, eff. 8-19-99; A by R080-01, 1-16-2002; R199-08, 8-26-2008, eff. 8-27-2008)

**From:** Michael Visher  
**To:** [Rich Perry \(rmperry@minerals.nv.gov\)](mailto:Rich.Perry@minerals.nv.gov)  
**Subject:** 517 feedback  
**Date:** Friday, September 13, 2019 1:22:00 PM  
**Attachments:** [NAC 517 27 AUG 2019 Draft.docx](#)

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Rich,

At yesterday's meeting with the Recorder's Association of Nevada, I presented our proposed changes to NAC 517. There was a lot of discussion regarding the mining claim fee decrease and unanimous consensus hoping that it is not changed. Some of the comments received:

Oh, please don't change it.

Do you understand how much work that entails for us?

Why are you changing it again after you just increased it?

We are increasing our filing fee by \$2 starting Jan. 1, so we're already having to explain and justify that, but if you decrease your fee by 50 cents July 1, then the story gets much more complex and harder to understand for our clients.

Understand that we also have to provide change on any filings paid in cash. This will increase the amount of cash and change we have to have on hand and track.

If you must change it, change it only by dollar increments.

Changes to fees require changes to our software and reports, which will cost us both time and money.

I understand it is rare to decrease a fee and it may be appreciated, but 50 cents doesn't seem like enough to matter when the BLM just increased their fee by \$10.

The current \$10 fee is simple and easy for claimants and our clerks to compute.

So this reduction equates to about \$100,000 per year, can't you find a way to spend that instead of reducing the fee? We sure could.

How long before you have to raise it again?

Mike

## **IV. B Recap of 2019 AML Program**

## 2019 NDOM AML Program CMR Update

Rob Ghiglieri will update the Commission on the following:

- Current AML statistics
- Intern statistics
- Winter intern and summer 2020 intern plans
- Completed and forecasted FY 20 contracted AML work
- NDOM AML contracts statuses
- USACE RAMS database project
- Tonopah NV point project
- Tonopah Historic Mining Park
- AML video RFP update
- AEMA AML discussion
- Gold Butte award
- NAAML P 2020